

CLAIMS

1. A video projector for projecting video, comprising:
 - a camera shake detection unit that detects an amount of camera shake of the video projector; and
 - a camera shake correction unit that corrects the camera shake according to the detected amount of camera shake.
2. The video projector as defined in Claim 1, further comprising:
 - short-wavelength laser light sources which emit laser lights of at least three colors of red, blue and green; and
 - the camera shake correction unit performs correction of the camera shake so that the projecting positions of the laser lights of three colors of red, blue and green are not deviated when the video is projected.
3. The video projector as defined in Claim 2 wherein
 - a video image is formed by scanning of the three-color laser lights on a projection region.
4. The video projector as defined in Claim 2 wherein
 - at least one of the short-wavelength laser light sources comprises:
 - an infrared semiconductor laser which emits infrared

laser light; and

a wavelength conversion element which makes the infrared laser light emitted from the infrared semiconductor laser subjected to wavelength conversion to output the converted laser light, and

a part of the light which is not subjected to wavelength conversion, among the infrared laser light that is emitted from the infrared semiconductor laser being outputted to the external space.

5. The video projector as defined in Claim 2, further comprising:

a camera device, and

the projection position of the laser light being detected by the camera device when the laser light from the short wavelength laser light source is projected.

6. The video projector as defined in Claim 5 wherein a projecting optical system which projects video takes the focus of the projected video by an auto-focusing function.

7. The video projector as defined in Claim 2, wherein the projecting optical system which projects video performs correction of the projected video in a trapezoidal shape when performing the projection of video.

8. The video projector as defined in Claim 2, further comprising:

a camera device;

the infrared laser light being irradiated to a region outside the projection region;

the infrared laser light from the region outside the projection region being detected.

9. The video projector as defined in Claim 2, wherein a portion serving as a remarque on the projection region is detected by the camera device when projecting video.

10. The video projector as defined in Claim 2 wherein the projection optical system which projects video has a prism having polarization, which is disposed on the optical axis of the projection optical system.

11. A video projector for projecting video, comprising:

a projection optical system which includes a short-wavelength laser light source and projects laser light which is emitted from the short-wavelength laser light source; and a camera device which captures external light through the projection optical system.

12. The video projector as defined in Claim 11, wherein the projection optical system takes the focus of projected video by an auto-focusing function.
13. The video projector as defined in Claim 11 wherein the projection optical system performs correction of the projected video in a trapezoid shape when performing the projection of video.
14. The video projector as defined in Claim 11, wherein the projecting optical system has a prism having polarization, which is disposed on the optical axis of the projection optical system.
15. The video projector as defined in Claim 11, wherein the short-wavelength laser light sources comprises:
 - an infrared semiconductor laser which emits infrared laser light; and
 - a wavelength conversion element which makes the infrared laser light emitted from the infrared semiconductor laser subjected to wavelength conversion to output the converted laser light, and
 - a part of the light which is not subjected to wavelength conversion, among the infrared laser light that is emitted from the infrared semiconductor laser being outputted to the

external space.